Tetra Tech EM Inc.

200 E. Randolph Drive, Suite 4700 ◆ Chicago, IL 60601 ◆ (312) 856-8700 ◆ FAX (312) 938-0118

August 26, 2003

Mr. Jeffrey Kimble
On-Scene Coordinator
Emergency Response Branch
U.S. Environmental Protection Agency Region 5
9311 Groh Road
Grosse Ile, MI 48138-1697

Subject: **Letter Report on Emergency Response and Removal Activities**
Sealmore Corporation
Muskegon, Muskegon County, Michigan
Technical Direction Document No. S05-0306-001
Tetra Tech Contract No. 68-W-00-129

Dear Mr. Kimble:

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting the enclosed letter report regarding emergency response and removal activities at the Sealmore Corporation site in Muskegon, Muskegon County, Michigan.

If you have any questions or comments regarding the report or require additional copies, please contact me at (312) 946-6442 or Thomas Kouris at (312) 946-6431.

Sincerely,

Michelle Cullerton
Tetra Tech START Project Manager

Enclosure

cc: Lorraine Kosik, U.S. EPA START Project Officer
Thomas Kouris, Tetra Tech START Program Manager

LETTER REPORT ON
EMERGENCY RESPONSE AND
REMOVAL ACTIVITIES
SEALMORE CORPORATION
MUSKEGON, MUSKEGON COUNTY, MICHIGAN

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 5 Emergency Response Branch
9311 Groh Road
Grosse Ile, MI 48138-1697

Date Prepared:	August 26, 2003
TDD No.:	S05-0306-001
Contract No.:	68-W-00-129
Prepared by:	Tetra Tech EM Inc.
Tetra Tech START Project Manager:	Michelle Cullerton
Telephone No.:	(312) 946-6442
U.S. EPA On-Scene Coordinator:	Jeffrey Kimble
Telephone No.:	(734) 692-7688

CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) has prepared this letter report in accordance with Technical Direction Document (TDD) No. S05-0306-001, which the U.S. Environmental Protection Agency (U.S. EPA) assigned to START. The scope of this TDD was to perform emergency response and removal activities and oversight of these activities at the Sealmore Corporation (Sealmore) site in Muskegon, Muskegon County, Michigan.

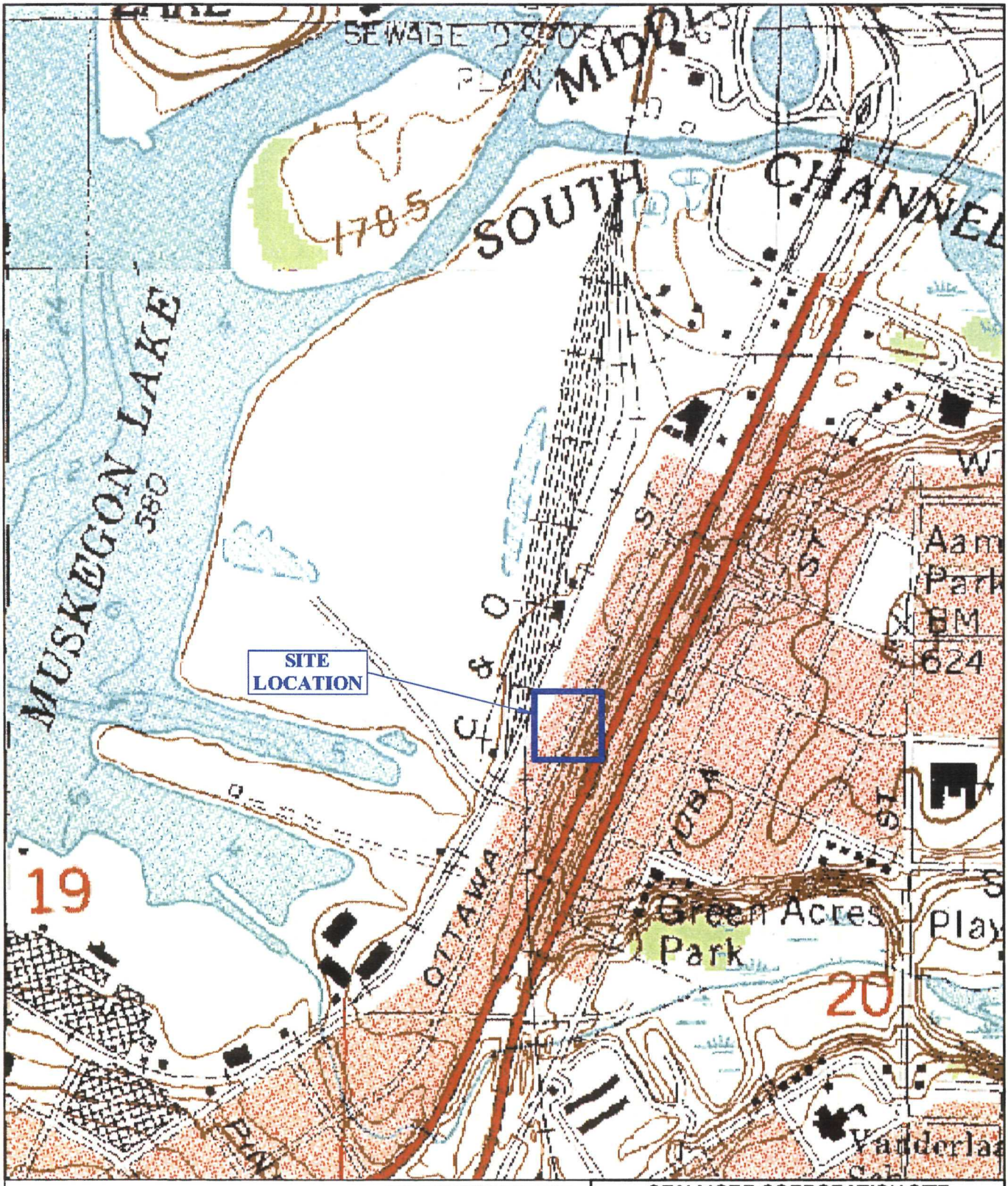
This report presents site background information (Section 2.0), describes the emergency response and removal activities (Section 3.0), and provides a summary of these activities (Section 4.0). Appendix A presents a data validation package for samples collected during the emergency response and removal activities, and Appendix B presents a photographic log documenting emergency response and removal activities at the site.

2.0 SITE BACKGROUND

The Sealmore site is an abandoned plating facility located at 423 Ottawa Street, Muskegon, Michigan (see Figure 1). The site consists of a one-room processing building with an attached office along the east wall of the building and a driveway on the south side of the building (see Figure 2). The site is in a mixed commercial and manufacturing area, and two residential properties are located across the street east of the abandoned site. Less than 0.5 mile to the west of the site is Muskegon Lake and a recreational park area. A railroad line borders the site about 100 feet to the west as well. Commercial facilities are located north and south of the site.

On February 10, 2003, the City of Muskegon condemned the site because of its deteriorating and unsafe condition. The City of Muskegon also boarded up the on-site building to prevent vandals from accessing the building. On April 23, 2003, the City of Muskegon notified the Michigan Department of Environmental Quality (MDEQ) Remediation and Redevelopment Division (RRD) of the abandoned site. RRD conducted a site inspection on April 28, 2003, and noted brick buldging out from the building wall due to years of deterioration and visible staining on the eastern exterior wall. The roof was also collapsed in several areas, allowing rain water to enter the building, pool on the floor, and collect in the vats and in an open floor pit. RRD also observed several deteriorating, leaking containers and open process tanks. Containers observed during the inspection included 10 55-gallon drums outside of the building; 15 55-gallon drums inside the building; 16 open process tanks inside the building; 5 55-gallon cardboard containers containing a white powder material; 9 5-gallon containers inside the building; and 4 open floor pits inside the building.

The site was referred to the MDEQ Office of Criminal Investigation on April 29, 2003, based on RRD's observations during the site inspection. On June 2, 2003, RRD requested the assistance of U.S. EPA to mitigate health, safety, and environmental threats at the site because of the potential for vandals and trespassers to access the dilapidated building.



0 1000 2000
SCALE IN FEET

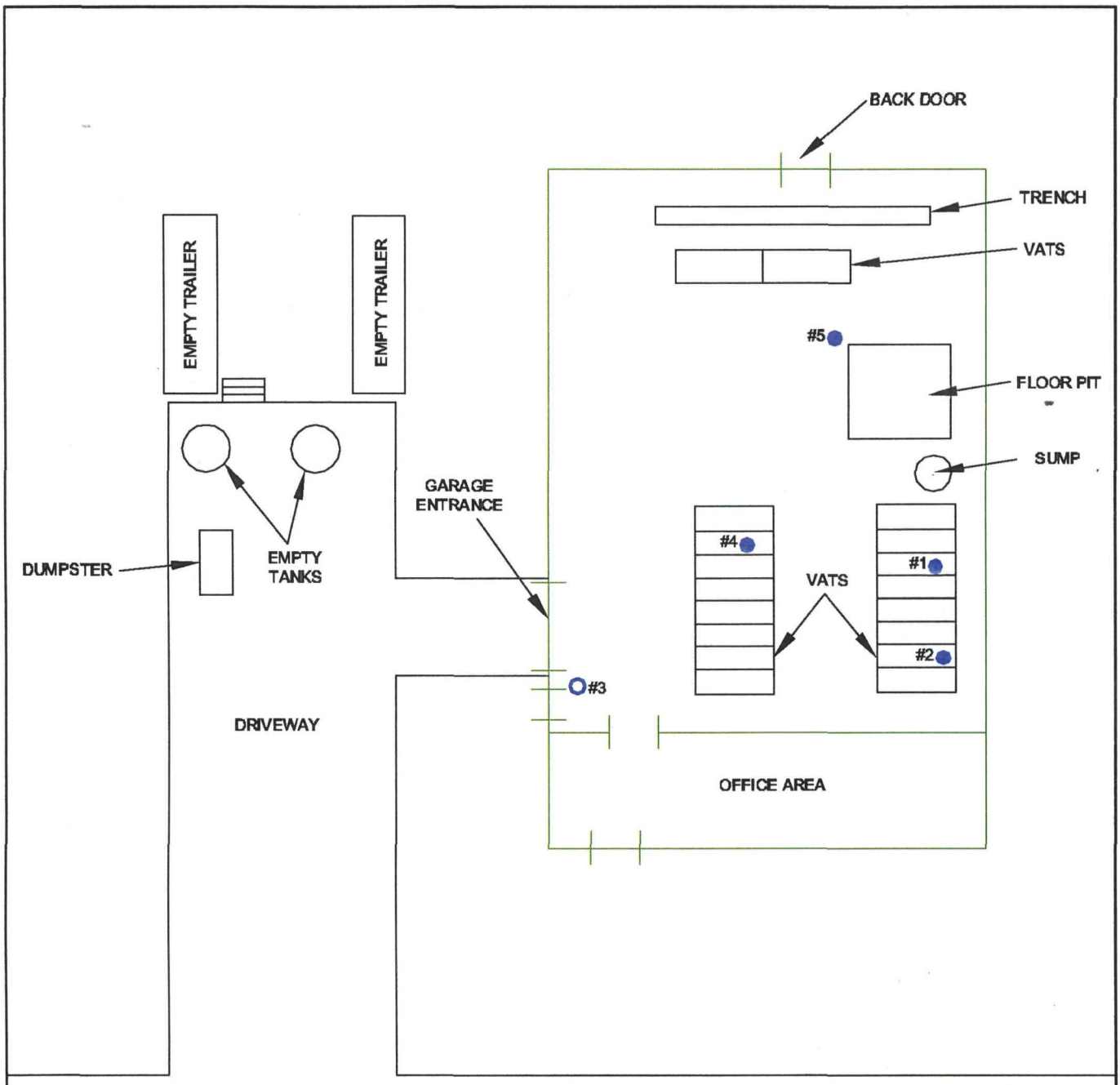
MICHIGAN
QUADRANGLE LOCATION

SOURCE: MODIFIED FROM U.S. GEOLOGICAL SURVEY, 7.5-MINUTE TOPOGRAPHIC MAP OF MUSKEGON, MICHIGAN, QUADRANGLE, 1993

SEALMORE CORPORATION SITE
423 OTTAWA STREET
MUSKEGON, MICHIGAN

FIGURE 1
SITE LOCATION MAP

Tetra Tech EM Inc.



LEGEND

- BUILDING
- SAMPLING LOCATION; SAMPLE NOT SENT TO LABORTORY
- SAMPLING LOCATION; SAMPLE SENT TO LABORTORY

N

NOT TO SCALE

SEALMORE CORPORATION SITE
423 OTTAWA STREET
MUSKEGON, MICHIGAN

FIGURE 2
SITE LAYOUT AND
SAMPLING LOCATION MAP

Tetra Tech EM Inc.

3.0 EMERGENCY RESPONSE AND REMOVAL ACTIVITIES

On June 5, 2003, U.S. EPA and START mobilized to the Sealmore site, met with RRD, and conducted an initial walk-through of the site in Level B personal protection equipment. Figure 2 shows features observed by START. The site building was dilapidated, and overhead hazards were evident from the collapsed roofing. Rain had significantly damaged areas underneath the leaking roof. Green staining was observed near the garage entrance, indicating potential off-site migration of contaminated material from the site, which could reach storm drains that empty into Lake Muskegon. Lake Muskegon is directly connected by a channel to Lake Michigan. Outside the building, START observed two empty trailers northwest of the building with 11 empty and partially full drums under them as well as two empty steel tanks.

Inside the building, START observed containers and drums located throughout the building that were leaking, with visible pooling and staining; one open floor pit; 16 small and 2 large processing vats located in the eastern and western portions of the building, respectively; a sump; and a trench in the western part of the building containing clear liquid.

Labels on several containers revealed that the contents were hydrofluoric, chromic, nitric, and sulfuric acids; Uni-Kleen 49D; Aluminum Brightener 18; Iridite 80; and various caustic cleaning solutions. One of the open drums near an area of collapsed roof was partially full and labeled as a mix of hydrofluoric and sulfuric acids. The pH of the drummed materials ranged from 1 to 14 standard units. The pH of the liquids in the trench and floor pit were both 6 standard units.

Five samples were collected from drum and vat liquids, and hazardous categorization (hazcat) field tests were performed on each sample. Based on the field hazcatting results, START submitted four of the five collected waste samples to a local laboratory for analysis. Appendix A provides the validated data report. Each sample collected and the analyses conducted are summarized below (see Figure 2).

- Sample #1 was collected from Vat 1 and analyzed for hexavalent chromium, Toxicity Characteristic Leaching Procedure (TCLP) metals, and pH.
- Sample #2 was collected from Vat 2 and analyzed for pH.

- Sample #4 was collected from Vat 5 and analyzed for hexavalent chromium, TCLP metals, and pH.
- Sample #5 was collected from a 55-gallon polyethylene drum located near the floor pit and labeled hydrofluoric acid. The waste sample was analyzed for pH.

Table 1 summarizes sample analytical results. MDEQ collected a split of each sample for off-site laboratory analysis. At this point, U.S. EPA contacted the ERRS rapid response contractor to initiate an emergency removal action and mobilize to the site the next day.

On June 6, 2003, the ERRS contractor arrived at the site. START began oversight of emergency response and removal activities as well as air monitoring. The ERRS contractor moved the outdoor drums under the trailers inside the building. A total of 42 drums and containers of various size, 16 small processing vats, and the floor pit were inventoried. A search of the entire site was conducted to locate additional small containers. By the end of the day, each container and vat had been sampled. START and the ERRS contractor initiated hazcatting of the collected samples. Spilled materials and debris on the floors were removed, and site security during non-working hours was also initiated.

On June 7, 2003, the ERRS contractor continued removing debris and spilled material from the floors. The collected material was placed in 55-gallon drum liners and staged in the building. Hazcatting of samples and waste stream determination was completed. The following preliminary waste streams were identified: chromic acid liquids, chromic acid solids, acid liquids, acid solids, caustic liquids, caustic solids, neutral liquids, neutral solids (including floor material), flammable liquids, and hydrofluoric acid.

On June 8, 2003, the ERRS contractor completed gross decontamination of the floor. A 4,000-gallon polyethylene tank and a 25-cubic-yard hazardous waste roll-off box were delivered to the site. Debris collected from the floor was placed into the roll-off box. Segregation and labeling of containers by appropriate waste stream was also completed. All empty containers were cut and placed into the roll-off box.

On June 9, 2003, the ERRS contractor transferred neutral liquids from the floor pit, trench, and processing vats to the 4,000-gallon tank. The ERRS contractor continued to consolidate remaining liquids into 55-gallon polyethylene drums. Representatives from MDEQ collected a water sample from

TABLE 1

ANALYTICAL RESULTS SUMMARY TABLE
SEALMORE CORPORATION
MUSKEGON, MICHIGAN

Parameter	Sample Identification No.			
	# 1	# 2	# 3	# 4
pH (standard units)	2.7	9.61	8.04	0
Hexavalent Chromium (µg/L)	1,400,000	NA	21,000	NA
TCLP Metals (µg/L)				
Silver	U	NA	U	NA
Arsenic	620	NA	U	NA
Barium	U	NA	U	NA
Cadmium	U	NA	U	NA
Chromium	1,600,000	NA	U	NA
Lead	U	NA	23,000	NA
Mercury	U	NA	U	NA
Selenium	U	NA	U	NA

Notes:

All samples were collected on June 5, 2003

NA = Not analyzed
TCLP = Toxicity Characteristic Leaching Procedure
U = Undetected at reporting limit
µg/L = Microgram per liter

the sump located inside the building near the floor pit and surface soil samples from various locations throughout the site property. The ERRS contractor submitted eight waste samples to Sima Laboratory in Merrillville, Indiana, for disposal analysis as discussed below.

- Disposal Sample SC-1 was analyzed for hexavalent chromium, total Resource Conservation and Recovery Act (RCRA) metals (including zinc, nickel, and copper), and pH.
- Disposal Sample SC-2 was analyzed for hexavalent chromium, RCRA metals (including zinc, nickel, and copper), and pH.
- Disposal Sample SC-3 was analyzed for RCRA metals (including zinc, nickel, and copper), and pH.
- Disposal Sample SC-4 was analyzed for RCRA metals (including zinc, nickel, and copper), and pH.
- Disposal Sample SC-6 was analyzed for hexavalent chromium, RCRA metals (including zinc, nickel, and copper), and pH.
- Disposal Sample SC-7 was analyzed for pH, TCLP metals, TCLP volatile organic compounds (VOC), TCLP semivolatile organic compounds (SVOC), flashpoint, reactive cyanide, reactive sulfide, British thermal units (BTU), polychlorinated biphenyls (PCB), and total halides (TOX).
- Disposal Sample SC-8 was analyzed for flashpoint, BTU, PCBs, and TOX.

On June 10, 2003, the ERRS contractor completed cutting the empty vats and polyethylene piping located throughout building and completed consolidation of drum contents into appropriate waste streams.

On June 11, 2003, the ERRS contractor completed high-pressure decontamination of the building floors and completed staging the drums for future transportation and disposal. START collected disposal Sample SC-5 from the 4,000-gallon tank for pH, TCLP metals, TCLP VOCs, TCLP SVOCs, flashpoint, reactive cyanide, and reactive sulfide analyses. The site was secured, and U.S. EPA, START, and the ERRS contractor demobilized from the site until transportation and disposal activities were approved and scheduled. The site had 24-hour security until U.S. EPA and its contractors returned.

On June 29, 2003, U.S. EPA, START, and the ERRS mobilized to the site to complete transportation and disposal activities.

On June 30, 2003, the drummed wastes were properly labeled for off-site transportation and disposal at the Michigan Disposal Waste Treatment Plant in Belleville, Michigan, and EQ Resource Recovery in Romulus, Michigan.

On July 1, 2003, the roll-off box and the liquids from the 4,000 gallon tank, the floor pit, and trench were transported off site to the Michigan Disposal Waste Treatment Plant in Belleville, Michigan. Table 2 summarizes the waste category, quantity, manifest number, and disposal facility for materials transported off site. After transportation and disposal activities were completed, the site was secured and U.S. EPA, START, and the ERRS crew demobilized from the site.

TABLE 2

WASTE DISPOSITION SUMMARY TABLE
SEALMORE CORPORATION
MUSKEGON, MICHIGAN

Waste Category	Total Quantity	Manifest Number	Disposal Facility
Nonhazardous Liquid, Caustic	110 Gallons	MI8253126	MDWTP
Waste Hydrofluoric Acid and Sulfuric Acid Liquid Mixture	110 Gallons	MI8253126	MDWTP
Waste Flammable Liquid	220 Gallons	MI8253127	EQ Resource Recovery
Waste Chromic Acid Solution, Chromic Acid Liquid	440 Gallons	MI8253128	MDWTP
Waste Chromic Acid Solid	110 Gallons	MI8253128	MDWTP
Waste Corrosive Liquid, Acidic, Inorganic	110 Gallons	MI8253128	MDWTP
Waste Corrosive Solid, Basic, Inorganic	110 Gallons	MI8253128	MDWTP
Hazardous Waste Solid, Chrome-Contaminated Solid and Debris	20 Cubic Yards	MI9330646	MDWTP
Hazardous Waste Liquid, Chrome-Contaminated Liquid (Chrome and Benzene)	2,996 Gallons	MI9337349	MDWTP

Notes:

MDWTP = Michigan Disposal Waste Treatment Plant

4.0 SUMMARY

The Sealmore site is located at 423 Ottawa Street, Muskegon, Michigan, in a mixed commercial and manufacturing area. Two residential properties are located across the street east of the abandoned site. Previous site investigations revealed deteriorating and leaking containers, open process tanks, and an open floor pit at the site. The site was also not completely secure. Labels on several containers revealed the following information: hydrofluoric, chromic, nitric and sulfuric acid; Uni-Kleen 49D; Aluminum Brightener 18; Iridite 80; and various caustic cleaning solutions.

On June 2, 2003, RRD requested the assistance of U.S. EPA to mitigate health, safety, and environmental threats at the site because of the potential for vandals and trespassers to access the dilapidated site building. From June 5 through 11 and from June 29 through July 1, 2003, U.S. EPA, START, and the ERRS contractor performed emergency response and removal activities at the site. A total of 4,206 gallons and 20 cubic yards of hazardous materials including caustic, acidic, chromic, flammable, and hydrofluoric liquids; chromic acid and corrosive solids; and hazardous, chrome-contaminated liquids and solids, empty containers and vats, associated piping, and floor waste and debris were removed. Finally, the building floor was power washed and the site was secured. Based on these activities, the site no longer poses an imminent threat to human health and the environment, and no further action is required at the site at this time.

APPENDIX A

DATA VALIDATION PACKAGE

(13 Pages)

Tetra Tech EM Inc.
200 E. Randolph Drive, Suite 4700 ◆ Chicago, IL 60601 ◆ (312) 856-8700 ◆ FAX (312) 938-0118

MEMORANDUM

Date: August 21, 2003

To: Michelle Cullerton, Project Manager, Tetra Tech EM Inc. (Tetra Tech)
Superfund Technical Assessment and Response Team (START) for Region 5

From: Harry Ellis, Chemist, Tetra Tech START for Region 5

Subject: Data Validation for
Sealmore Corporation Site
Muskegon, Michigan
Analytical Technical Direction Document (TDD) No. S05-0306-005
Project TDD No. S05-0306-001

Trace Analytical Laboratories, Inc. (Trace)
Work Order No. DF075
pH Analyses of Four Waste Samples and Toxicity Characteristic Leaching Procedure (TCLP) Metals Analyses and Hexavalent Chromium Analyses of Two Waste Samples

1.0 INTRODUCTION

The Tetra Tech START for Region 5 validated pH analytical data for four waste samples and TCLP metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) and hexavalent chromium analytical data for two of these waste samples collected during an emergency response conducted on June 5, 2003, at the Sealmore Corporation site in Muskegon, Michigan. The samples were analyzed under the above-referenced work order by Trace using U.S. Environmental Protection Agency (U.S. EPA) SW-846 Methods 9040 and 9041 for pH analyses; Methods 1311, 6010B, and 7470 for TCLP metals analyses; and Method 7196 for hexavalent chromium analyses. Two samples were analyzed using all methods, and the other two samples were analyzed for pH only.

The data were validated in general accordance with U.S. EPA's "Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (NFG) dated July 2002. Inorganic data validation

consisted of a review of the following QC parameters: holding times, initial and continuing calibrations, blank results, inductively coupled plasma (ICP) interference check sample results, laboratory control sample (LCS) results, duplicate sample results, matrix spike/matrix spike duplicate (MS/MSD) results, and sample result quantitation.

Section 2.0 discusses the results of the inorganic data validation, and Section 3.0 presents an overall assessment of the data. The attachment to this memorandum contains Trace's summary of analytical results as well as START's handwritten data qualifications where warranted.

2.0 INORGANIC DATA VALIDATION RESULTS

The results of START's inorganic data validation are summarized below in terms of the QC parameters reviewed. The data qualifiers below were applied to the sample analytical results where warranted (see attachment).

- J - The analyte was detected. The reported numerical value is considered estimated for QC reasons.
- UJ - The analytes was not detected. The sample quantitation limit is considered estimated for QC reasons.

2.1 HOLDING TIMES

The samples were analyzed for metals within the holding time limits of 28 days for mercury and 6 months for other metals. Because the samples were liquid, the only TCLP preparation required was filtering. There are no established holding times for pH and hexavalent chromium analyses of waste samples, and all analyses were completed within a few days of laboratory receipt of the samples.

2.2 INITIAL AND CONTINUING CALIBRATIONS

All initial calibration results were within the various QC limits for correlation coefficient (mercury and hexavalent chromium) and recovery (other metals and pH). All continuing calibration results were within the QC limits of 80 to 120 percent recovery for mercury, 90 to 110 percent recovery for all other metals, and plus or minus 0.1 standard unit for pH. The pH result for sample No. 1 was 2.7, which is outside the calibration range of 4.0 to 10.0 standard units. This extrapolated result was flagged "J" to indicate that it is considered estimated.

2.3 BLANK RESULTS

Appropriate blanks, such as initial calibration blanks, continuing calibration blanks, and preparation blanks, were run with each analytical batch. No metals were detected in the blanks.

2.4 ICP INTERFERENCE CHECK SAMPLE RESULTS

ICP interference check sample analyses were performed as required and yielded acceptable results.

2.5 LCS RESULTS

Duplicate LCSs were analyzed with the metals analyses. The LCS results were within the QC limits of 84 to 113 percent and a relative percent difference (RPD) of 12 percent or less for mercury, 83 to 115 percent and an RPD of 7.4 percent or less for hexavalent chromium, and 80 to 120 percent and an RPD of 20 percent or less for all other metals.

2.6 DUPLICATE SAMPLE RESULTS

No method duplicate samples were analyzed, but the precision results for the duplicate LCS and the MS/MSD analyses were generally within the laboratory-established QC limits for RPDs. No qualifications are warranted for this data gap.

2.7 MS/MSD RESULTS

An MS and an MSD sample were analyzed for metals, including hexavalent chromium. The results for mercury were within laboratory-established QC limits of 74 to 122 percent and an RPD of 12 percent or less. The results for hexavalent chromium were within the laboratory-established QC limits of 50 to 141 percent and an RPD of 28 percent or less. Sample No. 1 (Vat No. 1) was used for MS/MSD analyses of the other metals. The parent sample chromium concentration was more than 6,000 times the spike concentration; therefore, recovery of that metal could not be determined but the RPD was acceptable. No qualifications are warranted for this data gap. Lead recoveries were 62 and 76 percent, respectively, versus QC limits of 75 to 125 percent. Lead was not detected in the samples; therefore, the lead quantitation limit results were flagged "UJ" to indicate that they are considered estimated (biased low). Other recoveries ranged from 77 to 115 percent, within the QC limits of 75 to 125 percent. The RPDs for selenium and silver were 21 and 28 percent, respectively, which exceeded the QC limit of 20 percent. Neither metal was detected in the associated samples; therefore, no qualifications were applied for these irregularities.

2.8 SAMPLE RESULT QUANTITATION

The positive sample result quantitations were checked for sample No. 1 (Vat No. 1). Results were calculated correctly.

3.0 OVERALL ASSESSMENT OF DATA

Overall, the sample analytical data generated by Trace are acceptable for use as qualified. Trace performed the pH analysis for the sample believed to be hydrofluoric acid using the paper method, and the result is compatible with the sample's presumed identity.

ATTACHMENT

TRACE SUMMARY OF SAMPLE ANALYTICAL RESULTS

(Seven Sheets)

phone 231.773.5998
toll-free 800.733.5998
fax 231.773.6537

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673
www.trace-labs.com

TRACE
the science of compliance

Ms. Lisa Graczyk
Tetra Tech EM Inc.

CLIENT ID: Project #G90090306001/Sealmore
SAMPLE ID: #1 (Vat #1)
BATCH ID: MIC061202W

TRACE ID: DF075-01
REPORT DATE: 06/13/03
ANALYST: ms
SAMPLE DATE: 06/05/03
SAMPLE RECEIVED: 06/06/03
SAMPLE TYPE: Waste
SAMPLER: bb

TCLP METALS	DIGESTION DATE	RESULT µg/L	REPORTING LIMIT µg/L	ANALYZED	METHOD NUMBER
Silver	06/12/03	U	100	06/13/03	EPA 1311/6010
Arsenic	06/12/03	620	300	06/13/03	EPA 1311/6010
Barium	06/12/03	U	1000	06/13/03	EPA 1311/6010
Cadmium	06/12/03	U	100	06/13/03	EPA 1311/6010
Chromium	06/12/03	1600000	500	06/13/03	EPA 1311/6010
Lead	06/12/03	U-J	500	06/13/03	EPA 1311/6010
Selenium	06/12/03	U	600	06/13/03	EPA 1311/6010

HUE
25 Jul 03

U = Undetected at reporting limits

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Muskegon, MI 49444-2673
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Ms. Lisa Graczyk
Tetra Tech EM Inc.

TRACE ID: DF075-01
REPORT DATE: 06/13/03
ANALYST: ms
SAMPLE DATE: 06/05/03
SAMPLE RECEIVED: 06/06/03
SAMPLE TYPE: Waste
SAMPLER: bb

CLIENT ID: Project #G90090306001/Sealmore
SAMPLE ID: #1 (Vat #1)
BATCH ID: MER061002W

TCLP METALS	DIGESTION DATE	RESULT µg/L	REPORTING LIMIT µg/L	ANALYZED	METHOD NUMBER
Mercury	06/10/03	U	10	06/11/03	EPA 1311/7470

U = Undetected at reporting limits

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toll free 800 733-5998
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Ms. Lisa Graczyk
Tetra Tech EM Inc.

TRACE ID: DF075-03
REPORT DATE: 06/13/03
ANALYST: ms
SAMPLE DATE: 06/05/03
SAMPLE RECEIVED: 06/06/03
SAMPLE TYPE: Waste
SAMPLER: bb

CLIENT ID: Project #G90090306001/Sealmore
SAMPLE ID: #4 (Vat #5)
BATCH ID: MIC061202W

TCLP METALS	DIGESTION DATE	RESULT µg/L	REPORTING LIMIT µg/L	ANALYZED	METHOD NUMBER
Silver	06/12/03	U	100	06/13/03	EPA 1311/6010
Arsenic	06/12/03	U	300	06/13/03	EPA 1311/6010
Barium	06/12/03	U	1000	06/13/03	EPA 1311/6010
Cadmium	06/12/03	U	100	06/13/03	EPA 1311/6010
Chromium	06/12/03	23000	500	06/13/03	EPA 1311/6010
Lead	06/12/03	UJ	500	06/13/03	EPA 1311/6010
Selenium	06/12/03	U	600	06/13/03	EPA 1311/6010

HUE
25JW03

U = Undetected at reporting limits

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TRACE
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Ms. Lisa Graczyk
Tetra Tech EM Inc.

TRACE ID: DF075-03
REPORT DATE: 06/13/03
ANALYST: ms
SAMPLE DATE: 06/05/03
SAMPLE RECEIVED: 06/06/03
SAMPLE TYPE: Waste
SAMPLER: bb

CLIENT ID: Project #G90090306001/Sealmore
SAMPLE ID: #4 (Vat #5)
BATCH ID: MER061002W

TCLP METALS	DIGESTION DATE	RESULT µg/L	REPORTING LIMIT µg/L	ANALYZED	METHOD NUMBER
Mercury	06/10/03	U	10	06/11/03	EPA 1311/7470

U = Undetected at reporting limits

phone 231.773.5998
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Trace Analytical Laboratories, Inc.
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TRACE
the science of compliance

Ms. Lisa Graczyk
Tetra Tech EM Inc.

TRACE ID: DF075
REPORT DATE: 06/13/03
METHOD: EPA 9040
ANALYST: km
SAMPLE RECEIVED: 06/06/03
SAMPLE TYPE: Waste
SAMPLER: bb

CLIENT ID: Project #G90090306001/Sealmore

TRACE SAMPLE NO.	SAMPLE DATE	SAMPLE ID	pH	REPORTING LIMIT	ANALYZED
01	06/05/03	#1 (Vat #1)	2.70 J	NA	06/13/03
02	06/05/03	#2 (Vat #2)	9.61	NA	06/13/03
03	06/05/03	#4 (Vat #5)	8.04	NA	06/13/03

HUG
25 Jul 03

U = Undetected at reporting limits

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TRACE
the science of compliance

Ms. Lisa Graczyk
Tetra Tech EM Inc.

TRACE ID: DF075
REPORT DATE: 06/13/03
METHOD: EPA 9041
ANALYST: jm
SAMPLE RECEIVED: 06/06/03
SAMPLE TYPE: Waste
SAMPLER: bb

CLIENT ID: Project #G90090306001/Sealmore

TRACE SAMPLE NO.	SAMPLE DATE	SAMPLE ID	pH	REPORTING LIMIT	ANALYZED
04	06/05/03	#5 (SS gal/ncarpit)	0	NA	06/09/03

U = Undetected at reporting limits

phone 231.773.5998
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Ms. Lisa Graczyk
Tetra Tech EM Inc.

TRACE ID: DF075
REPORT DATE: 06/13/03
METHOD: EPA 7196
ANALYST: km
SAMPLE RECEIVED: 06/06/03
SAMPLE TYPE: Waste
SAMPLER: bb

CLIENT ID: Project #G90090306001/Sealmore
BATCH ID: HEX061301W

TRACE SAMPLE NO.	SAMPLE DATE	SAMPLE ID	HEXAVALENT CHROMIUM ug/L	REPORTING LIMIT ug/L	ANALYZED
01	06/05/03	#1 (Vat #1)	1400000	* 50000	06/13/03
03	06/05/03	#4 (Vat #5)	21000	* 2500	06/13/03

* The reporting limit was raised due to dilution.

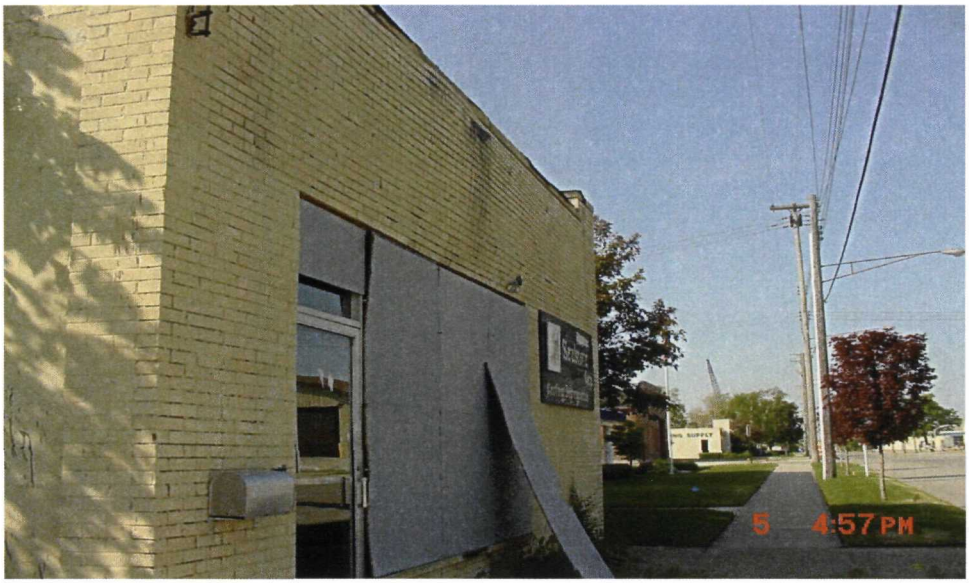
Method Blank	NA	WB061301	U	5.0	06/13/03

U = Undetected at reporting limits

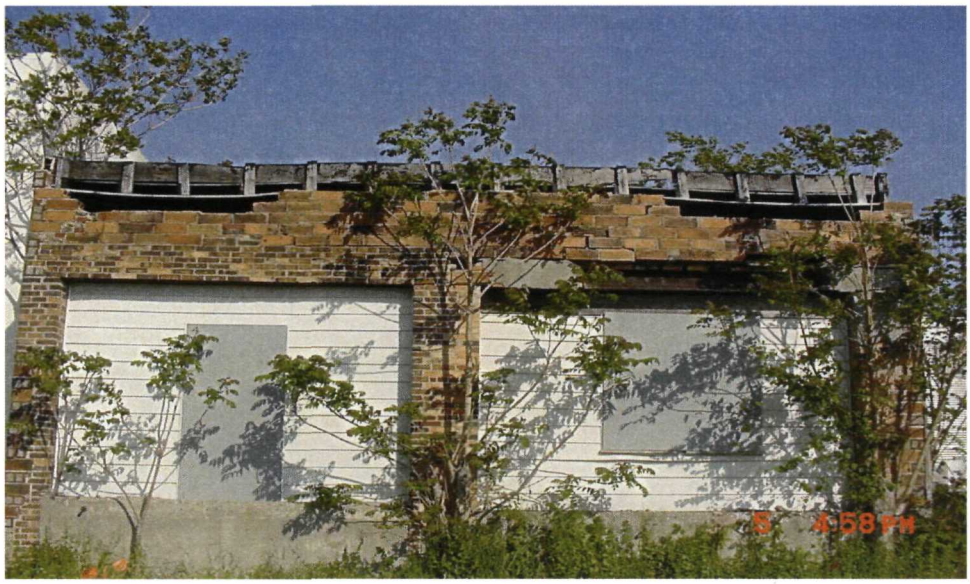
APPENDIX B

PHOTOGRAPHIC LOG

(15 Pages)



Photograph No.: 1 **Orientation:** Northeast
TDD No.: S05-0306-001 **Date:** June 5, 2003
Location: Sealmore Corporation Site
Subject: Bulging brick on eastern wall of on-site building



Photograph No.: 2 **Orientation:** East
TDD No.: S05-0306-001 **Date:** June 5, 2003
Location: Sealmore Corporation Site
Subject: Western wall of on-site building

Photograph No.: 3
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: South entrance to building

Orientation: Northeast
Date: June 5, 2003

Photograph No.: 4
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Drip pan located on north side of building

Orientation: Southeast
Date: June 5, 2003

Photograph No.: 5
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Plating vats located inside building

Orientation: East
Date: June 5, 2003

Photograph No.: 6
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Plating vats located inside building

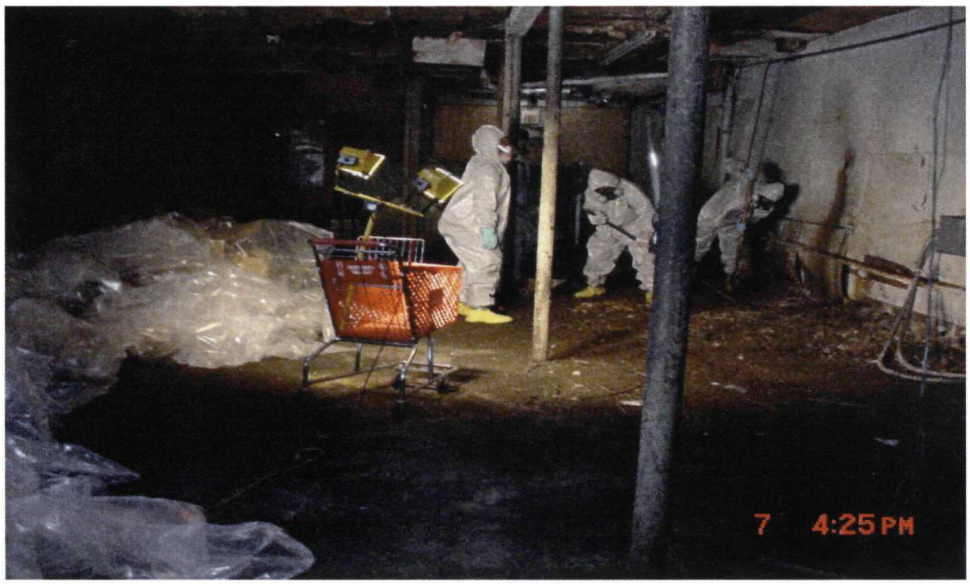
Orientation: Northeast
Date: June 5, 2003

Photograph No.: 7 **Orientation:** Not applicable (NA)
TDD No.: S05-0306-001 **Date:** June 5, 2003
Location: Sealmore Corporation Site
Subject: Open 10-gallon drum containing suspected oxidizer inside building

Photograph No.: 8 **Orientation:** NA
TDD No.: S05-0306-001 **Date:** June 6, 2003
Location: Sealmore Corporation Site
Subject: Drums being inventoried

Photograph No.: 9 **Orientation:** North
TDD No.: S05-0306-001 **Date:** June 6, 2003
Location: Sealmore Corporation Site
Subject: Floor pit located in northern portion of building

Photograph No.: 10 **Orientation:** North
TDD No.: S05-0306-001 **Date:** June 6, 2003
Location: Sealmore Corporation Site
Subject: Floor pit located in northern portion of building near hydrofluoric acid drum



Photograph No.: 11
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Removal of floor material
Orientation: West
Date: June 7, 2003

Photograph No.: 12
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Staged drums and containers
Orientation: North
Date: June 7, 2003

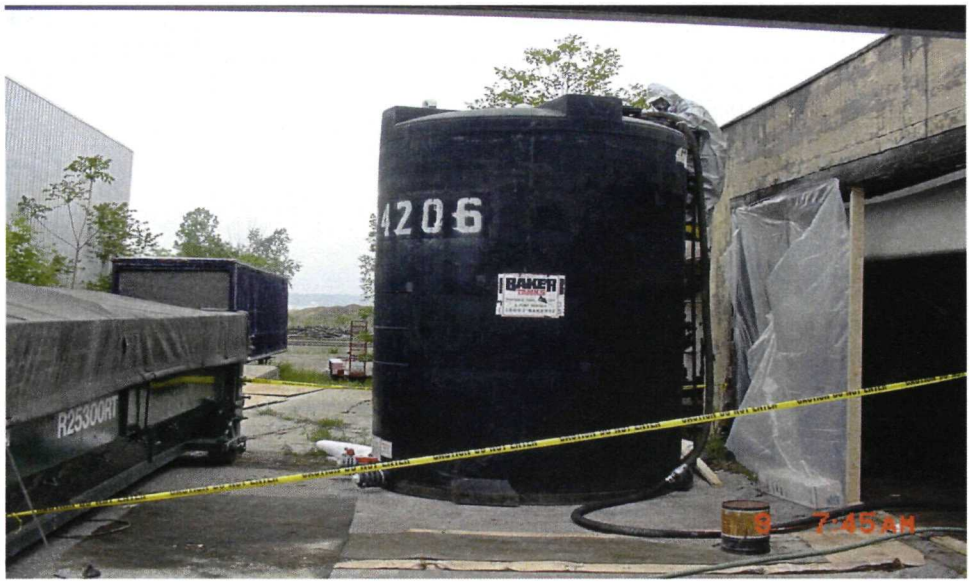
Photograph No.: 13
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Ceiling material collapsing

Orientation: NA
Date: June 8, 2003

Photograph No.: 14
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Office located on southeast side of building

Orientation: North
Date: June 9, 2003

Photograph No.: 15 **Orientation:** South
TDD No.: S05-0306-001 **Date:** June 9, 2003
Location: Sealmore Corporation Site
Subject: Debris and equipment removed from office



Photograph No.: 16 **Orientation:** West
TDD No.: S05-0306-001 **Date:** June 9, 2003
Location: Sealmore Corporation Site
Subject: 4,000-gallon polyethylene tank

Photograph No.: 17
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Roll-off box for waste material

Orientation: West
Date: June 9, 2003

Photograph No.: 18
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Overpacked drums for building wastes

Orientation: North
Date: June 9, 2003

Photograph No.: 19
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Railroad track located west of site

Orientation: West
Date: June 9, 2003

Photograph No.: 20
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Floor pit and debris

Orientation: NA
Date: June 9, 2003

Photograph No.: 21
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Floor pit and debris

Orientation: NA
Date: June 9, 2003

Photograph No.: 22
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Sump located near floor pit

Orientation: NA
Date: June 9, 2003

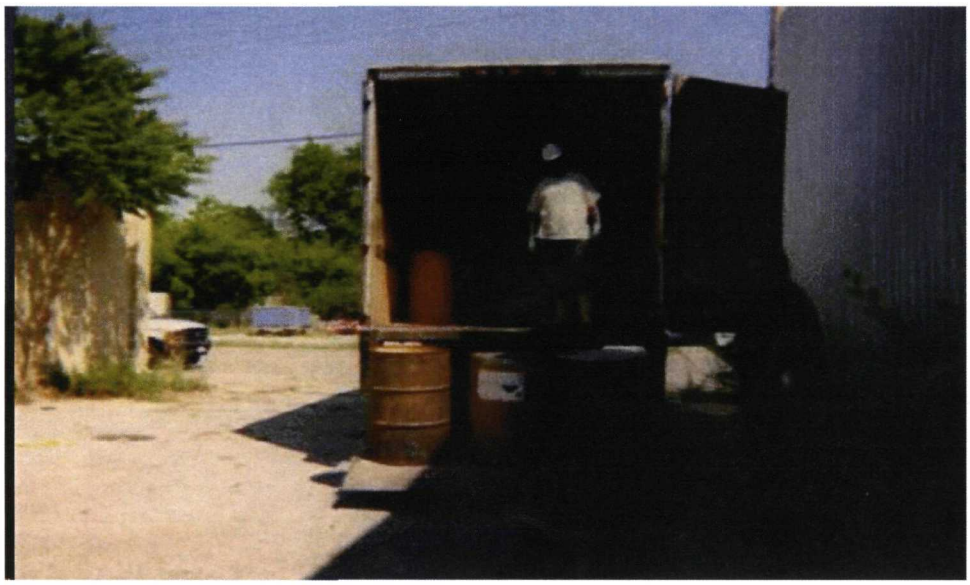
Photograph No.: 23
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Hole in roof

Orientation: NA
Date: June 9, 2003

Photograph No.: 24
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Removal of material from vats

Orientation: NA
Date: June 9, 2003

Photograph No.: 25 **Orientation:** West
TDD No.: S05-0306-001 **Date:** June 30, 2003
Location: Sealmore Corporation Site
Subject: Drums staged for transportation and disposal



Photograph No.: 26 **Orientation:** East
TDD No.: S05-0306-001 **Date:** June 30, 2003
Location: Sealmore Corporation Site
Subject: Loading of drums and empty containers on truck for off-site transportation

Photograph No.: 27 **Orientation:** South
TDD No.: S05-0306-001 **Date:** June 30, 2003
Location: Sealmore Corporation Site
Subject: Roll-off box transported off site to disposal facility

Photograph No.: 28 **Orientation:** East
TDD No.: S05-0306-001 **Date:** July 1, 2003
Location: Sealmore Corporation Site
Subject: Building after vats removed and floor power-washed

Photograph No.: 29
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Secured back door of building

Orientation: North
Date: July 7, 2003

Photograph No.: 30
TDD No.: S05-0306-001
Location: Sealmore Corporation Site
Subject: Secured garage door

Orientation: North
Date: July 7, 2003